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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/678,026  
Filing Date: September 30, 2003  
Appellant(s): JOHANNESSEN, KJETIL

**MAILED**  
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**GROUP 1700**

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Kevin A. Reif  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 21 April 2006 appealing from the Office action mailed 16 September 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Ground 3 should read:

"3. Claims 25, 27-28 and 30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hogg (and with Official Notice for claims 28 and 30). "

It is clear from the paragraph spanning pages 8-9 of the Final Office action that there is a typographical error in the statement of the rejection – claim 30 was inadvertently omitted and claim 26 inadvertently included (claim 26 has been cancelled). The PTOL-326 cover sheet of the Final Office action also shows that claim 30 was rejected. These changes do not constitute a new ground of rejection. As pointed out in MPEP 1207.03:

There is no new ground of rejection when the basic thrust of the rejection remains the same such that an appellant has been given a fair opportunity to react to the rejection. See *In re Kronig*, 539 F.2d 1300, 1302-03, 190 USPQ 425, 426-27 (CCPA 1976). Where the statutory basis for the rejection remains the same, and the evidence relied upon in support of the rejection remains the same, a change in the discussion of, or rationale in support of, the rejection does not necessarily constitute a new ground of rejection. *Id.* at 1303, 190 USPQ at 427 (reliance upon fewer references in affirming a rejection under 35 U.S.C. 103 does not constitute a new ground of rejection).

## **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

## **(8) Evidence Relied Upon**

5,237,630	HOGG	8-1993
5,879,571	KALMAN	3-1999

OFFICIAL NOTICE, taken in the Office action of 3/24/2005 and repeated in the Office action of 9/16/2005 (page 8).

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22-25, 28, 31-33 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kalman 5879571.

The method of claim is disclosed at figures 6A-6F.

Claim 22 of the present appeal reads:

**A method of forming a self-aligning alignment dot on an end surface of a waveguide for self-aligning the waveguide with a second waveguide, the method comprising:**

**applying a mask to an end surface of the waveguide;**

**ablating a portion of the mask by exposing the mask to a high energy light beam traveling through the waveguide to create a mask opening; and**

**filling the mask opening with an optical material to form a self-aligning dot, the optical material having a melting point and when melted in the proximity of a second alignment dot on a second waveguide, surface tension pulls the waveguide and the**

**second waveguide into alignment with each other.**

**Preamble: A method of forming a self-aligning alignment dot on an end surface of a waveguide for self-aligning the waveguide with a second waveguide, the method comprising:**

Feature 120 of figure 6 A-F is the self alignment dot on the end surface of a waveguide (62). It is inherent that it is a self-aligning dot for self-aligning the waveguide with a second waveguide (although Appellant disputes this).

As to the dot being a “self-alignment dot” it is deemed that such is an intended use of the dot which does not define over Kalman. Examiner sees nothing which would prevent one from using the dot to self align with another fiber as claimed. Nor has applicant given any indication as to why Kalman’s dot is not a self-alignment dot.

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

**Step 1: applying a mask to an end surface of the waveguide;**

See col. 8, lines 35-36 which teaches applying (i.e. depositing) a thin layer 110 – this is a mask. Applicant does not dispute this.

**Step 2. ablating a portion of the mask by exposing the mask to a high energy light beam traveling through the waveguide to create a mask opening; and**

Figure 6B shows the exposing of mask 110 to UV light traveling through the waveguide 62 to create a mask opening (see figure 6c). Whereas Kalman does not use the term “ablating”, such does not define over Kalman.

The beam is “high-energy” because it was high enough energy to effect the photoresist. It is noted that the term “high-energy” is not limited by the specification/claims/prior art so as to exclude this interpretation; the Office gives claims their broadest reasonable interpretation consistent with the disclosure and prior art.

The term “ablating” is not defined in the present specification. Examiner has previously determined that the broadest reasonable interpretation for “ablate” in the present claims is: to remove. Applicant has not disputed this interpretation. Applicant has not disputed the finding that Kalman anticipates the claimed ablating step. Furthermore Kalman’s removal is substantially the same as Applicant’s ablation.

**Step 3: filling the mask opening with an optical material to form a self-aligning dot, the optical material having a melting point and when melted in the proximity of a second alignment dot on a second waveguide, surface tension pulls the waveguide and the second waveguide into alignment with each other.**

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Figure 6D shows the step of filling the mask opening with optical material 115 which has a melting point (col. 8, lines 44-46 and col. 7, lines 56-57). Applicant does not dispute this.

As to the surface tension pulling a waveguide and the alignment: as indicated above, they are deemed to be intended use limitation. The claims do not require a step of melting or pulling. It is clear from the preamble the method is for making the dot: there is nothing that requires using the dot.

Claim 23: it is clear from figure 6E that the mask material (110) has been removed.

Claim 24: it is noted that Appellant's specification does not define the term "ablating light". It is deemed that the broadest reasonable interpretation of the claims is any light that is used in an ablating step is an ablating light. Appellant has not disputed this interpretation.

Claim 25: The term "optical probe" is not described or defined. It is deemed that whatever source of light is used to provide the Kalman UV light can be considered to be an "optical probe". Examiner can find no basis for holding that "optical probe" would exclude substantially any generic light source.

Claim 28 see figure 6B.

Claims 31-32 are clearly met as per the above cited relevant portions.

Claim 33 is met for substantially the same reason claim 22 is. The differences in the claim language are readily met by Kalman.

Claims 22 – 25, 29 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Hogg 5237630.

The invention is disclosed in the paragraph spanning cols. 7-8 of Hogg. See also Figure 8: b) shows the mask that was applied to the waveguide. Step c) and/or d) show the ablating step: the beam is “high-energy” because it was high enough energy to effect the photoresist. It is noted that the term “high-energy” is not limited by the specification/claims/prior art so as to exclude the such an interpretation; the Office gives claims their broadest reasonable interpretation consistent with the disclosure and prior art. The filling step is shown at figure e). As to the dot being a “self-alignment dot” it is deemed that such is an intended use of the dot which does not define over Hogg.

Claim 23: see figure 8 f)

Claim 24: it is noted that the specification does not define the term “ablating light”. It is deemed that the broadest reasonable interpretation of the claims is any light that is used in an ablating step is an ablating light. See the case law cited above.

Claim 25: See the last full sentence of col. 7 of Hogg. The term “optical probe” is not described or defined. It is deemed that whatever source of light is used to provide the Hogg light can be considered to be an “optical probe”.

Claims 29 and 33 are clearly met.

***Claim Rejections - 35 USC § 103***

Claims 25, 27-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogg. (and with Official Notice for claims 28 and 30)

Hogg discloses the invention as discussed above, but does not specifically mention the use of a probe. Since light is launched through the fiber, it is inherent that there is a light source that is optically coupled to the far end of the fiber. It would have been obvious to use a movable/adjustable light source (i.e. a probe) so as to be able to adjust its location as needed. Adjustability is not a patentable invention

**From MPEP 2144.04**

**C. Rearrangement of Parts**

In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.); In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). However, "The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device." Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984).

It is would have been obvious to have the probe at any location (above, below, left, right) relative to the waveguide. Further it would have been obvious to rearrange the fiber so that the parts (which inherently would include at least part of the cladding)

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are remove from one location to another. One would reasonably expect that one moves various features so that they do not interfere with other features, so that one does not accidentally harm them, or for any other reason one would move one thing to another location.

It is noted that it does not seem possible that applicant could demonstrate any criticality for the "above" limitation. It would seem that one would get identical results merely by flipping the whole apparatus/process upside-down.

Claim 27: it is noted that the term "probe region" is not used in the specification. Thus it is presumed that the specification does not describe or define the term. Therefore it is presumed to be reasonable that the term "probe region" at least can encompass any region in which the probe is. It is deemed that the three-dimensional space that is encompassed by the Hogg probe is a "probe region". One would not expect to have any cladding – thus it would have a cladding of 0 microns.

Claim 28: Examiner takes official notice that UV-sensitive photoresists are well known. It would have been obvious to use UV –sensitive photoresists, depending upon what is available, and the what wavelengths the fiber most readily carries. Appellant has not traversed the taking of Official Notice, thus it is deemed to be admitted prior art.

Claim 30: Figure 13 of Hogg shows multiple short fiber segments with the dots on their ends. Examiner takes Official notice that it is conventional in the optical device art to make multiple items from the same stock item; specifically, it is conventional to make

multiple short fiber devices, from one single long fiber; and to make them sequentially, and to separate them from the stock fiber by cutting them from the stock item/fiber. It would have been obvious to make the short Hogg fiber sections of a single longer fiber, because it would have been more economical to make multiple devices from one stock item, than to make multiple devices from multiple stock items. It would have been further obvious to leave the stock fiber in one location, i.e. not remove the stock fiber from its location, because there would be no reason to move it, and because it would take time to move it. One could save time and effort by not moving what does not need to be moved. Again, Appellant has not traversed the taking of Official Notice, thus it is deemed to be admitted prior art.

#### **(10) Response to Argument**

Applicant's arguments filed 27 June 2005 have been fully considered but they are not persuasive.

It is argued that neither Kalman nor Hogg disclose having the alignments such that surface tension can be used to pull the waveguides together. This is largely irrelevant because none of the claims require a step of alignment, melting, surface tension or any other limitation directed to the intended use. The prior art need not actually disclose/suggest using them as per the claimed intended use.

**From MPEP 2145****II. ARGUING ADDITIONAL ADVANTAGES OR LATENT PROPERTIES****Prima Facie Obviousness Is Not Rebutted by Merely Recognizing Additional Advantages or Latent Properties Present in the Prior Art**

Mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention. *In re Wiseman*, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979) (Claims were directed to grooved carbon disc brakes wherein the grooves were provided to vent steam or vapor during a braking action. A prior art reference taught noncarbon disc brakes which were grooved for the purpose of cooling the faces of the braking members and eliminating dust. The court held the prior art references when combined would overcome the problems of dust and overheating solved by the prior art and would inherently overcome the steam or vapor cause of the problem relied upon for patentability by applicants. Granting a patent on the discovery of an unknown but inherent function (here venting steam or vapor) "would re-move from the public that which is in the public domain by virtue of its inclusion in, or obviousness from, the prior art." 596 F.2d at 1022, 201 USPQ at 661.); *In re Baxter Travenol Labs.*, 952 F.2d 388, 21 USPQ2d 1281 (Fed. Cir. 1991) (Appellant argued that the presence of DEHP as the plasticizer in a blood collection bag unexpectedly suppressed hemolysis and therefore rebutted any prima facie showing of obviousness, however the closest prior art utilizing a DEHP plasticized blood collection bag inherently achieved same result, although this fact was unknown in the prior art.).

"The fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious." *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985) (The prior art taught combustion fluid analyzers which used labyrinth heaters to maintain the samples at a uniform temperature. Although appellant showed an unexpectedly shorter response time was obtained when a labyrinth heater was employed, the Board held this advantage would flow naturally from following the suggestion of the prior art.). See also *Lantech Inc. v. Kaufman Co. of Ohio Inc.*, 878 F.2d 1446, 12 USPQ2d 1076, 1077 (Fed. Cir. 1989), cert. denied, 493 U.S. 1058 (1990) (unpublished — not citable as precedent) ("The recitation of an additional advantage associated with doing what the prior art suggests does not lend patentability to an otherwise unpatentable invention.").

*In re Lintner*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972) and *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990) discussed in MPEP § 2144 are also pertinent to this issue.

In other words, the fact that Appellant discovered that an end dot can be used to align fibers, is insufficient basis for granting a patent on the same invention.

The prior art dots clearly have melting points that can be used to self align. Especially see col. 7, lines 56-57 of Kalman which teaches the use of "low-melting temperature glasses" – which is what Appellant uses (page 8, lines 18-20). Since

Appellant does the same thing that is done in the prior art – with the same materials – one would expect the same result: an end dot which can be used to align fibers/waveguides.

Appellant complains that Examiner has not addressed the point that Hogg discusses other types of fiber alignment. To remedy this: Examiner finds this to be irrelevant to the question as to whether Hogg's dot is a self-alignment dot. It does not matter that Hogg does not teach Appellant's disclosed (but unclaimed) step of melting and aligning. The fact that Hogg can align fibers in one manner, is largely irrelevant to the question as to whether Hogg's fiber can be aligned in another manner – such Appellant's unclaimed melting. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims are comprising in nature and thus are open to other features – such as Hogg's ability to align fibers in another manner.

It is further argued that none of Hogg's alignment methods suggests 'the claimed melting of a "self alignment dot" as does Appellant's claimed invention.' This is misleading because the claims do not require melting or aligning. Moreover, the claims cannot implicitly (or otherwise) require such. As set forth in the preamble of claim 22, the invention creates a self-aligning dot – if the method requires melting and aligning, then the end product does not have a self-alignment dot, at best it would create an "dot that use to be able to cause self-alignment". Once the self-alignment occurs, it has no ability to align with a dot.

It is also argued that the term “ablating” is defined in the specification. The relevance of this argument is not understood. Examiner could find no indication as to why this would overcome the prior art rejection. Examiner could find no indication that Appellant’s position is that the prior art does not have an ablating step. If it is a relevant issue: Examiner disagrees with the arguments because the disclosure does not clearly and set forth a definition – rather the disclosure merely gives examples. Example may help to understand what is meant, but they do not set forth a definition.

It is also argued that the “new intended use” is not understood. To reiterate: Applicant has discovered a new intended use for prior art inventions. The prior art can be used to perform the intended use.

Appellant questions why Examiner made the rejection in view of Hogg, if Hogg would not have been obvious. Examiner did NOT indicate that Hogg would not have been obvious. Examiner merely set notice to Appellant that Examiner has not asserted that a self-alignment step was obvious. (Examiner also now notes that Examiner has not asserted that a self-alignment step was not obvious.) Rather, Examiner has been attempting to convey to Appellant that the claim does not require a step of self-aligning – thus it is irrelevant as to whether alignment is or is not obvious.

Appellant requests Examiner to point out the melting step in Kalman. Kalman does not have applicant’s disclosed (but unclaimed) melting step, thus it is impossible to meet Appellant’s request.

As to the optical probes, Appellant indicates they have no idea where the Examiner is coming from. The rejection is plain; examiner does not think he can better

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convey the basis for the rejection. Since Appellant has not pointed out how the claimed optical probe defines over Kalman, it is deemed that Appellant agrees that the Office has interpreted the claimed optical probe properly. Whereas Appellant argues that the probe is unrelated to optical probes used in medical purposes, mine shafts, etc., Applicant gives no indication as to why the claim is to be interpreted narrowly, so as to exclude a generic probe.

Appellant also points out Kalman has nothing to do with medical purposes, etc. Examiner is meeting his burden to explain how he is interpreting the claimed language. There is no prohibition on Examiner regarding how he explains the interpretation; there is no prohibition against discussing non-related technology areas.

It is also argued that claim 25 has nothing to do with adjustability. Examiner disagrees, because adjusting a probe to direct light reads on the claimed step of coupling. Coupling is a step – it is deemed to be a manipulative step – such as adjusting a light device to shine through the waveguide. The only other way to perform the prior art invention is to do the opposite of what is claimed: coupling the waveguide to the probe. Either of these options would have been obvious.

Regarding claim 30, it is argued that claim 30 requires that the optical material is a polymer or a sol-gel. This is clearly incorrect, see claim 30.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

JOHN HOFFMANN  
PRIMARY EXAMINER  
GROUP 1300

 6-9-06

Conferees:

  
Steven Griffin

Patrick Ryan 